

FACILITY STATUS CHANGE FORM

Date Submitted: January 3, 2013 Originator: Chris Strand Phone: 554-2720	Area: 300 Area Facility ID: 310, 310-T-7A, 310-T-7B, M0-744 Action Memorandum: Action Memorandum #3	Control #: D4-300-072 ³
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This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

- ☐ All D4 operations required by action memo complete.
- ☒ D4 operations required by action memo partially complete, remaining operations deferred.

Description of Completed Activities and Current Conditions:

Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

The following hazardous materials were removed prior to facility demolition: batteries, Freon, oil, light ballasts and miscellaneous construction materials. In addition, anthracite filter beds, and sulfuric acid, ferric chloride, and sodium hydroxide heels remaining in chemical feed tanks were removed. No Asbestos containing materials were found in the building during inspection. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work Plan for 300 Area Facilities*, DOE/RL-2004-77, Revision 2 (RAWP).

Demolition: Above-grade demolition of the 310 TEDF, 310-T-7A and 310-T-7B clarifier tanks, and Mobile Office MO-744 were completed in October 2012. Below-grade demolition of the 310 TEDF and 310-T-7A and 310-T-7B clarifier tanks was complete in December 2012. The primary effluent concrete sump located approximately 12 feet below-grade was cleaned of debris and surveyed following demolition. The sump was found to be free of contamination and left in place. In addition, a small portion of the 310 slab and clarifier tanks on the west site of the facility were left in place because of active utilities that remain in the area. The balance of facility components remain operational and were left in place as well (reference Attachment 1, Facility Information). The demolished area was backfilled to grade with clean fill and capped with washed round rock. The building debris from demolition was removed and disposed of at ERDF. The demolition was performed with Radiological and Industrial Hygiene controls.

Description of Deferral (as applicable):

A portion of the 310 TEDF Complex remains operational following a reconfiguration that now functions as the Retention Transfer System (RTS). The RTS receives at-risk effluent from the 325 Building, which is tested prior to returned to the combined 300 Area sanitary sewer system. Off-specification effluent would be pumped to tanker trucks at the 310-S load-out station.

Section 2: Underlying Soil Status

- ☐ No waste site(s) present. No additional actions anticipated.
- ☒ Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.
- ☐ Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.
- Cleanup and closeout to be addressed under Record of Decision.

Description of Current/As-Left Conditions:

The majority of the 310 TEDF and clarifier slabs and foundations were removed. The primary effluent sump below-grade structure and a small portion of the 310 slab and clarifier foundations were left in place and backfilled. Excavations were backfilled to grade with clean fill. GPERS surveys were performed prior to backfill.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):

300-15 process sewer remains active in the area. Waste Site 600-117 was assigned to the building. Waste Site

FACILITY STATUS CHANGE FORM

Reclassification form 2012-117, included as Attachment 4, establishes this site as interim closed.

Section 3: List of Attachments

1. Facility information (building history, characterization and identification of documented waste sites).
2. Project photographs.
3. GPERS Survey of the 310 TEDF excavation prior to backfill.
4. Waste Site Reclassification Form 2012-117 for 600-117.

DOE-RL

Date

Lead Regulator



EPA



Ecology

Date

DISTRIBUTION:

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Administrative Record, H6-08

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D4 EPL: Chris Strand, L4-45

Sample Design/Cleanup Verification: Theresa Howell, H4-22

FR Engineering: Eric Ison, L4-32

FR EPL: Chris Strand, L4-45

Attachment 1: Facility Information

Building History:

The 310 Treated Effluent Disposal Facility (TEDF) included the main treatment building (310) which was approximately 90 feet wide, 150 feet long, and 22 feet high. The building was of primarily metal construction. The facility included two exterior Diversion Tanks (62 feet in diameter each); one exterior Equalization Tank (45 feet in diameter); two exterior Clarifier Tanks (30 feet in diameter each); two container storage areas; one chemical storage area; and two modular/mobile offices (MO-744 and MO-745). MO-744 was a mobile office that provided office space to operations personnel. The entire facility was surrounded by a chain link security fence.

The facility treated and disposed of process sewer effluent from the 300 Area. Treatment included chemical precipitation, selective ion exchange, and UV/peroxide oxidation to destroy organics and cyanide. Following treatment, the effluent was discharged to the Columbia River via a submerged outfall. Chemicals used to treat process sewer influent included hydrogen peroxide, sodium hydroxide, sulfuric acid, and ferric chloride.

In 2009, the diversion and equalization tanks, and associated piping were modified to continue receiving effluent from the 325 Building following deactivation of the main plant. This system reconfiguration allowed for collection of “at risk” process sewer effluent from the 325 Building, which is then sampled to ensure the effluent contains no radiological contamination. Following sampling, the effluent is returned to the process sewer and discharged to the City of Richland waste water treatment plant. Off-specification water can be retained and pumped to a tanker truck at the 310-S structure for shipment to the 200 Area Effluent Treatment Facility. This reconfigured system is known as the Retention Transfer System and MO-745 remain to support continued operations. Remaining system components include 310-T-1, 310-T-2, 310-T-3, 310-V, and 310-S. These systems components and the mobile office remain in the original fenced plant area.

Building Characterization:

Table 1 summarizes the industrial hygiene, radiological control, and asbestos samples collected on facility components that were demolished.

Table 1. Summary of Characterization Surveys at 310 and MO-744.

Type	Date	Documented In	Results Summary
Asbestos	June 20, 2011 September 15, 2011	CCN # 159263 (310) CCN # 161254 (MO-744)	No ACM in either facility was identified through inspection and testing.
IH Surveys and Beryllium Characterization	December 15, 2010	BFA-310-12-001 (310) CCN# 153217 (310 & MO-744).	Both facilities determined to be Be free. All other contaminants of concern below action levels.
Radiological Surveys	July 20, 2011 April 20, 2011	RSR-300PS-11-3366 (MO-744) RSR-IFSM-11-0198 (310)	No radiological contamination was identified.

Associated WIDs sites:

600-117 WIDS number was assigned to the 310 Building. 300-15 process sewer supporting Retention Transfer System operations remains active in the area.

Anomalies Discovered During Demolition.

No anomalies were observed during the demolition of the 310 Building, clarifier tanks 310-T-7A, 310-T-7B, and MO-744. Soil beneath the 310 slab displayed no visual evidence of staining or discoloration. Radiological surveys of the soil and the main process sump following below-grade demolition performed using hand held and GPERS instrumentation identified no contamination.

Attachment 2: Project Photographs

Photograph 1: Pre-demolition aerial photo of 310 Complex in 2008



Photograph 2. Looking southeast at 310 on March 24, 2009.



Photograph 3. Looking southwest at MO-744 on March 24, 2009.



Photograph 4. Looking southeast at T-7A & T-7B on March 24, 2009



Photograph 5. Aerial photo of 310 Complex on December 6, 2012, following above-grade demolition



310 TEDF COMPLETION

Photograph 6. Looking south at 310 Complex on December 6, 2012 following below-grade demolition



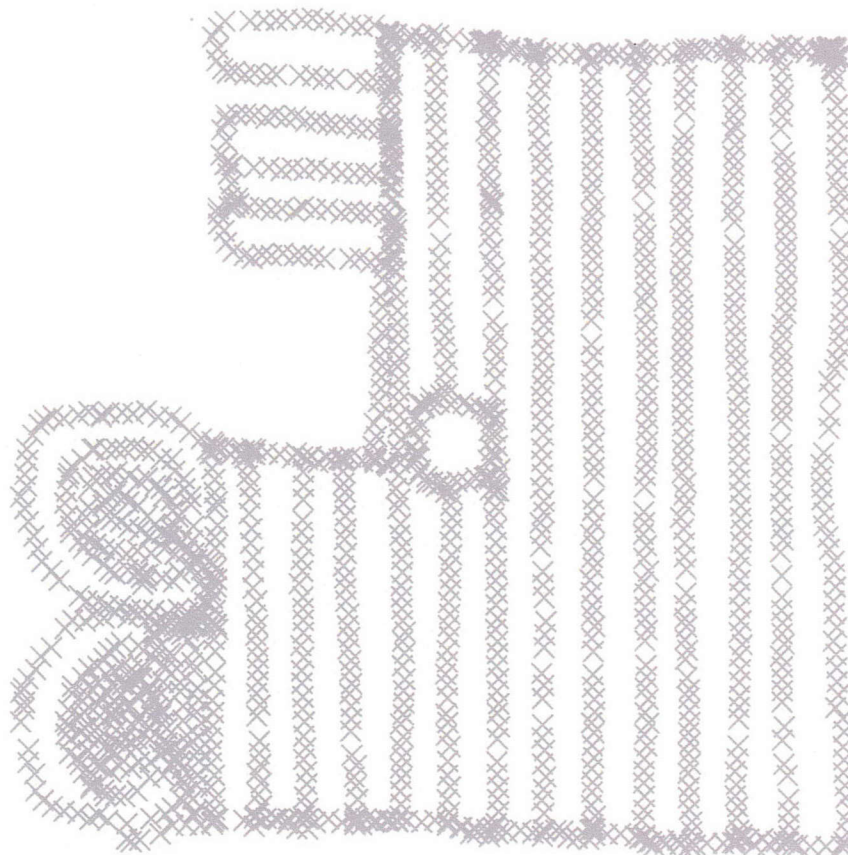
Photograph 7. Looking east at the 310 Process Sump on December 6, 2012 following below-grade demolition



Photograph 8. Looking north at the 310 Complex on December 20, 2012 following backfill



**Attachment 3: GPERS Survey of the 310 Excavation
Prior to Backfill.**



Site View

Bkg Location
1030 meters South
1174 cpm



Copy

Legend

NET CPM

- × <1761
- 1761 - 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage File: N179
Number of Data Pnts: 1711
Type of Survey: gamma
Max GCPM: 2291
Avg Bkg CPM: 1174
Survey Date: 11/28/2012
Area Surveyed: 2150 m²
Project File: ESRFRM120138
Pdf File: ESRFRM120138C

300 D4 300 / 310 TEDF GPERS Radiological Survey Gamma Track Map

0 2 4 6 8 10

Meters



Survey Map Prepared By Bruce Coomer, ESI

**Attachment 4: Waste Site Reclassification
Form 2012-117 for WIDS # 600-117**

WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2

Control No.: 2012-117

Waste Site Code(s)/Subsite Code(s):

600-117 (310 TEDF Building)

Reclassification Category: Interim ☒ Final ☐

Reclassification Status: Closed Out ☒ No Action ☐ Rejected ☐

RCRA Postclosure ☐ Consolidated ☐ None ☐

Approvals Needed: DOE ☒ Ecology ☐ EPA ☒

Description of current waste site condition:

The 600-117 waste site is synonymous with the 310 Treated Effluent Disposal Facility (TEDF) and is located within the 300-FF-2 Operable Unit. The 600-117 waste site was assigned to a physical structure and is not considered an unplanned release, nor does it otherwise represent contaminated media adjacent to or beneath the building. As such, the 310 TEDF was demolished in accordance with Action Memorandum #3 for the 300 Area and the *Removal Action Work Plan (RAWP) for 300 Area Facilities*, DOE/RL-2004-77, Rev. 2.

The 310 TEDF was a Clean Water Act; National Pollutant Discharge Elimination System permitted waste water treatment plant. 310 TEDF treated non-hazardous and non-radiological process waste water from 300 Area operations. The facility was deactivated in 2010 with demolition of the 310 Building and foundation being completed in December 2012. Investigation of soils beneath the floor slab following demolition of that structure confirmed no releases from the building occurred during past operations.

Site completion was performed in accordance with Section 2.6 of the RAWP and included an evaluation of soils underlying the building. Field investigations that included radiological surveys and visual inspection were performed. Final radiological surveys consisted of performing Global Positioning Environmental Radiological Surveys (GPERS). All survey results (reference Attachment 1 - GPERS maps) for building footprint soils found no radionuclides are present above background concentrations, which therefore meet the 300-FF-2 Remedial Action Goals (RAGs) for residential scenario. In addition, the foundation of the main process sump located below-grade will be left in place. Hand held radiological surveys were performed on the sump surfaces and no radionuclides are present above background concentrations (reference Attachment 2 – 310 Sump RSR). A visual inspection of the excavation soils was performed and no staining or other anomalous conditions were observed. These evaluations have been performed in accordance with remedial action objectives (RAOs) established by the *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington (300-FF-2 ROD) (EPA 2001).

WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2

Control No.: 2012-117

Waste Site Code(s)/Subsite Code(s):

600-117 (310 TEDF Building)

Basis for reclassification:

In accordance with this evaluation, the GPERS surveys and inspection results for 600-117 (310 TEDF Building) subsurface soils support a reclassification of this waste site to Interim Closed Out. The 600-117 waste site achieves the remedial action goals established by the 300-FF-2 Interim Action ROD (EPA 2001). The results of radiological surveys show that no residual contamination exists that require long-term institutional controls. The results also show that site conditions are protective of groundwater and the Columbia River.

Regulator comments:

WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2

Control No.: 2012-117

Waste Site Code(s)/Subsite Code(s):

600-117 (310 TEDF Building)

Waste Site Controls:

Engineered Controls: ☐ Yes ☒ No Institutional Controls: ☐ Yes ☒ No O&M Requirements: ☐ Yes ☒ No

If any of the Waste Site Controls are checked Yes, specify control requirements including reference to the Record of Decision, TSD Closure Letter, or other relevant documents:

M. S. French

DOE Federal Project Director (printed)



Signature

12/6/12
Date

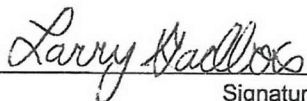
Ecology Project Manager (printed)

Signature

Date

L. E. Gadbois

EPA Project Manager (printed)



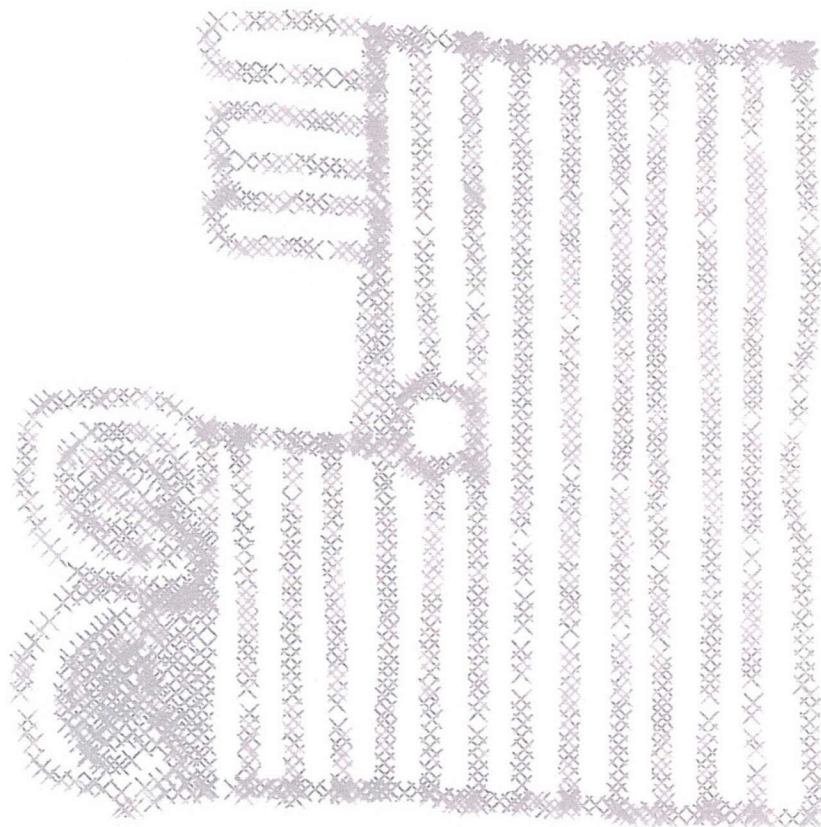
Signature

12-6-12
Date

WASTE SITE RECLASSIFICATION FORM (2012-117)

ATTACHMENT 1

**600-117 (310 BUILDING) EXCAVATION
GLOBAL POSITIONING ENVIRONMENTAL RADIOLOGICAL SURVEY MAPS**



Site View

Copy

Bkg Location
1030 meters South
1174 cpm



Legend

NET CPM

- X <1761
- 1761 - 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage File: N179
Number of Data Pnts: 1711
Type of Survey: gamma
Max GCPM: 2291
Avg Bkg CPM: 1174
Survey Date: 11/28/2012
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300 D4 300 / 310 TEDF GPERS Radiological Survey Gamma Track Map

0 2 4 6 8 10

Meters



EBERLINE
SERVICES

Survey Map Prepared By Bruce Coomer, ESI

WASTE SITE RECLASSIFICATION FORM (2012-117)

ATTACHMENT 2

**600-117 (310 BUILDING) PROCESS SUMP
RADIOLOGICAL SURVEY RECORD**

RADIOLOGICAL SURVEY RECORD

Page 1 of 2

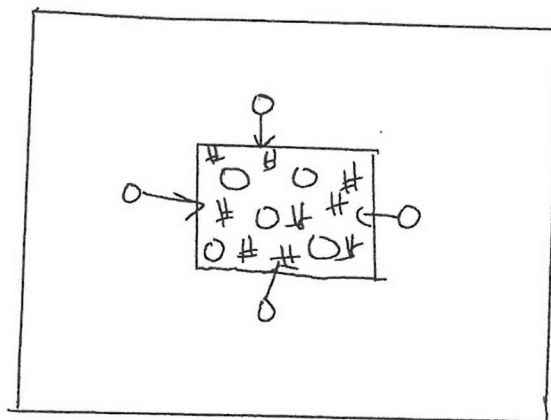
Type of Survey <input type="checkbox"/> Routine N/A <input checked="" type="checkbox"/> Work Progress			Survey # RSR - 300PS-12-4447		
RWP # / Rev. # N/A		Date 12/4/12	Time 1400	Location 300 PS/310 Pit	
Description 310 Pit Survey					
References: (e.g., SRTA, ASER, LASER, RSP, Work Package) TA-07-SR-10/12					

Performed Work Progress Survey of the 310 Excavation Pit.

Performed directs (on sides and floor of pit) and tech smears (on items greater than 1" - rocks, concrete).

No contamination was found

Please note that this area is not considered a radiological area and was not posted.



CA Contamination Area	HCA High Contamination Area	RBA Radiological Buffer Area	ARA Airborne Radioactivity Area	[AS] Air Sample Location	RMA Radioactive Materials Area	RA Radiation Area	HRA High Radiation Area	VHRA Very High Radiation Area		
<input type="radio"/> Technical Smear	# Direct	M Large Area Wipe	T Transferable	General Area Dose Rates = Uncorrected Meter Reading (mR/hr)	All radiation readings are γ dose rates in units of mR/hr unless otherwise indicated	Contact 30 cm	N Neutrons (mRem/hr)	Δ Micro Rem (μR/hr)	SCA Soil Contamination Area	Radiological Boundary x—x—x

Instruments

Model	ID #	Cal Due Date	Model	ID #	Cal Due Date
2360	SCLL8-0917	10/19/13	43-93	DTLLP-1014	10/19/13
2224-3	SCLLB-0180	5/14/13	43-93	DTLLP-0829	5/14/13
N/A	N/A	N/A	N/A	N/A	N/A

RCT Name/Signature/Date: Deb Poteet <i>Deb Poteet</i> 12/4/12 Dave Culver <i>Dave Culver</i> 12/4/12	RCT Supervisor Name/Signature/Date: Randy Griener <i>Randy Griener</i> 12/5/12 Jasey McNeel <i>Jasey McNeel</i> 12/5/12
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Survey # RSR -

300PS-12-4442

Circled values indicate Removable β contamination in mrad/hr β

Show all work. CF = 1 unless noted.

A handwritten 'r' and 'e' on a grid. The 'r' is in the top-left cell, and the 'e' is in the bottom-right cell.